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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/304,879	05/04/1999	HAROLD W. JOHNSON	1212	1275

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EXAMINER	
WEST, LEWIS G	
ART UNIT	**PAPER NUMBER**
2682	

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/304,879	JOHNSON, HAROLD W.	
	Examiner	Art Unit	
	Lewis G. West	2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,10-42,44 and 51-82* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,10-42,44 and 51-82* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 May 1999* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

Claim 57 objected to because of the following informalities: Claim 57 appears to be mistakenly amended. Limitations added to the claim are the same as those applied to the different logic claims and do not make sense in context. It is assumed to be clerical error. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 10-11, 13-42, 44, 51-52 and 54-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hou (US 6,324,184) in view of Raychaudhuri (US 5,638,371).

Regarding claim 1, Hou discloses a method for communicating between a communications device and a network system, the method comprising: receiving a first request for a first communication service, dynamically configuring a media access control (MAC) layer in the transmission link for the requested first communication service by identifying a first number of channels of a section of channels of the MAC layer of the transmission link for the requested first communication service; receiving a second request for a second communication service into the base stations system over the wireless transmission link wherein the second

communication service is different from the first communication service; determining if the second communication service has a higher priority than the first communication service (Col. 11 lines 11-60); in response to determining that the second communication service has a higher priority than the first communication service, dynamically configuring the MAC layer for the second communication service by identifying a second number of channels of the section of channels of the MAC layer and reducing the first number of channels of the MAC layer of the wireless transmission link for the first communication service (Col. 9 line 61-col. 10 line 24); and generating and transmitting an instruction to provide the requested first communication service and the second communication service over the wireless transmission link using the dynamically configured MAC layer. (Col. 7 line 37-col. 8 line 14) but does not disclose a base station communicating wirelessly with a mobile device. Raychaudhuri discloses a base station and mobile device using a dynamic system of MAC allocation, Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the dynamic priority based allocation with a base station and mobile device as suggestion lies in Hou that the allocation may be used in wireless systems, and this would accomplish more efficient use of bandwidth in the wireless system.

Regarding claim 3, the combination of Hou and Raychaudhuri discloses the method of claim 2 wherein identifying the section of the MAC layer of the wireless transmission link for the requested communication service further comprises identifying a control family for the requested communication services wherein the control family relates to the section of the MAC layer.

Regarding claim 10, the combination of Hou and Raychaudhuri discloses the method of claim 2 wherein arbitrating access is further comprised of prorating among communication services based on usage parameter control values. (Raychaudhuri Col. 11 lines 37-60)

Regarding claim 11, the combination of Hou and Raychaudhuri discloses The method of claim 2 wherein arbitrating access is further comprised of using first come first serve logic. (Raychaudhuri Col. 3 lines 52-61)

Regarding claim 13, the combination of Hou and Raychaudhuri discloses the method of claim 2 wherein arbitrating access is further comprised of using fair queuing logic. (Raychaudhuri Col. 3 lines 52-61)

Regarding claim 14, the combination of Hou and Raychaudhuri discloses the method of claim 2 wherein arbitrating access is further comprised of using burst servicing logic. (Raychaudhuri Col. 3 lines 52-61)

Regarding claim 15, the combination of Hou and Raychaudhuri discloses the method of claim 2 wherein arbitrating access is further comprised of using time of expiry logic. (Raychaudhuri Col. 10 lines 33-39)

Regarding claim 16, the combination of Hou and Raychaudhuri discloses the method of claim 1 wherein the communication service is voice communication. (Raychaudhuri Col. 4 line 36-53)

Regarding claim 18, the combination of Hou and Raychaudhuri discloses the method of claim 1 wherein the communication service is modem communication. (Raychaudhuri Col. 4 line 36-53)

Regarding claim 22, the combination of Hou and Raychaudhuri discloses the method of claim 1 wherein the communication service is data transfer. (Raychaudhuri Col. 4 line 36-53)

Regarding claim 27, the combination of Hou and Raychaudhuri discloses the method of claim 1 wherein the communication service is desktop multimedia communication. (Raychaudhuri Col. 4 line 36-53)

Regarding claim 30, the combination of Hou and Raychaudhuri discloses the method of claim 1 wherein dynamically configuring the MAC layer in the wireless transmission link is based on delivery requirements of communication services. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 31, the combination of Hou and Raychaudhuri discloses the method of claim 30 wherein the delivery requirement is time dependency. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 32, the combination of Hou and Raychaudhuri discloses the method of claim 30 wherein the delivery requirement is a need for real time communication. (Raychaudhuri Col. 4 line 36-53)

Regarding claim 33, the combination of Hou and Raychaudhuri discloses the method of claim 30 wherein the delivery requirement is quality of service. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 34, the combination of Hou and Raychaudhuri discloses the method of claim 30 wherein the delivery requirement is traffic pattern. (Raychaudhuri Col. 11 line 50- col. 12 line 60)

Regarding claim 35, the combination of Hou and Raychaudhuri discloses the method of claim 30 wherein the delivery requirement is bandwidth. (Raychaudhuri Col. 3 lines 62-64)

Regarding claim 36, the combination of Hou and Raychaudhuri discloses the method of claim 30 wherein the delivery requirement is grade of service. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 37, the combination of Hou and Raychaudhuri discloses the method of claim 1 wherein the MAC layer of the wireless transmission link further comprises a fixed allocation sub frame and a dynamic allocation sub frame. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 38, the combination of Hou and Raychaudhuri discloses the method of claim 37 wherein the fixed allocation sub frame further comprises requests slots for reservation information. (Raychaudhuri Col. 7 lines 6-19)

Regarding claim 39, the combination of Hou and Raychaudhuri discloses the method of claim 37 wherein the fixed allocation sub frame further comprises constant bit rate slots for voice packets. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 40, the combination of Hou and Raychaudhuri discloses The method of claim 37 wherein the dynamic allocation sub frame further comprises variable bit rate slots for variable bit rate packets. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 41, the combination of Hou and Raychaudhuri discloses the method of claim 37 wherein the dynamic allocation sub frame further comprises data slots for data packets. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 42, Hou discloses a software product comprising: communication software operational when executed by a processor to direct the processor to receive a request for a communication service into a system over a wireless transmission link, in response to receiving the request, dynamically configure a media access control (MAC) layer in the wireless transmission link for the requested communication service by identifying a first number of channels of a section of channels of the MAC layer of the wireless transmission link for the requested first communication service; receiving a second request for a second communication

service into the system over the wireless transmission link wherein the second communication service is different from the first communication service; determining if the second communication service has a higher priority than the first communication service (Col. 11 lines 11-60); in response to determining that the second communication service has a higher priority than the first communication service, dynamically configuring the MAC layer for the second communication service by identifying a second number of channels of the section of channels of the MAC layer and reducing the first number of channels of the MAC layer of the wireless transmission link for the first communication service (Col. 9 line 61-col. 10 line 24); and generate and transmit an instruction to provide the requested first and second communication services over the wireless transmission link using the dynamically configured MAC layer (Col. 7 line 37-col. 8 line 14); and a software storage medium (CENTRAL CONTROLLER) operational to store the communication software (Col. 12 lines 1-7), but does not disclose a base station communicating wirelessly with a mobile device. Raychaudhuri discloses a base station and mobile device using a dynamic system of MAC allocation, Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the dynamic priority based allocation with a base station and mobile device as suggestion lies in Hou that the allocation may be used in wireless systems, and this would accomplish more efficient use of bandwidth in the wireless system.

Regarding claim 44, the combination of Hou and Raychaudhuri discloses the software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to identify a control family for the requested communication

services wherein the control family relates to the section of the MAC layer. (Raychaudhuri Col. 11 line 50- col. 12 line 60)

Regarding claim 51, the combination of Hou and Raychaudhuri discloses the software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to prorate among communication services based on usage parameter control values. (Raychaudhuri Column 7 lines 20-40)

Regarding claim 52, the combination of Hou and Raychaudhuri discloses the software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to use first come first serve logic. (Raychaudhuri Col. 3 lines 52-61)

Regarding claim 54, the combination of Hou and Raychaudhuri discloses the software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to use fair queuing logic. (Raychaudhuri Col. 3 lines 52-61)

Regarding claim 55, The combination of Hou and Raychaudhuri discloses the software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to use burst servicing logic. (Raychaudhuri Col. 3 lines 52-61)

Regarding claim 56, the combination of Hou and Raychaudhuri discloses the software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to use time of expiry logic. (Raychaudhuri Col. 10 lines 33-39)

Regarding claim 57, the combination of Hou and Raychaudhuri discloses the method of claim 1 wherein the communication service is voice communication. (Raychaudhuri Col. 4 line 36-53)

Regarding claim 59, the combination of Hou and Raychaudhuri discloses the method of claim 1 wherein the communication service is modem communication. (Raychaudhuri Col. 4 line 36-53)

Regarding claim 63, the combination of Hou and Raychaudhuri discloses the method of claim 1 wherein the communication service is data transfer. (Raychaudhuri Col. 4 line 36-53)

Regarding claim 68, the combination of Hou and Raychaudhuri discloses the method of claim 1 wherein the communication service is desktop multimedia communication. (Raychaudhuri Col. 4 line 36-53)

Regarding claim 71, The combination of Hou and Raychaudhuri discloses The software product of claim 42 wherein the communication software is operational when executed by a processor to direct the processor to dynamically configure the MAC layer in the wireless transmission link based on delivery requirements of communication services. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 72, the combination of Hou and Raychaudhuri discloses the software product of claim 71 wherein the delivery requirement is time dependency. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 73, the combination of Hou and Raychaudhuri discloses the software product of claim 71 wherein the delivery requirement is a need for real time communication. (Raychaudhuri Col. 4 line 36-53)

Regarding claim 74, the combination of Hou and Raychaudhuri discloses the software product of claim 71 wherein the delivery requirement is quality of service. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 75, the combination of Hou and Raychaudhuri discloses the software product of claim 71 wherein the delivery requirement is traffic pattern. (Raychaudhuri Col. 11 line 50- col. 12 line 60)

Regarding claim 76, the combination of Hou and Raychaudhuri discloses the software product of claim 71 wherein the delivery requirement is bandwidth. (Raychaudhuri Col. 3 lines 62-64)

Regarding claim 77, the combination of Hou and Raychaudhuri discloses the software product of claim 71 wherein the delivery requirement is grade of service. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 78, The combination of Hou and Raychaudhuri discloses the software product of claim 42 wherein the MAC layer of the wireless transmission link further comprises a fixed allocation sub frame and a dynamic allocation sub frame. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 79, the combination of Hou and Raychaudhuri discloses the software product of claim 78 wherein the fixed allocation sub frame further comprises requests slots for reservation information. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 80, the combination of Hou and Raychaudhuri discloses the software product of claim 78 wherein the fixed allocation sub frame further comprises constant bit rate slots for voice packets. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 81, The combination of Hou and Raychaudhuri discloses The software product of claim 78 wherein the dynamic allocation sub frame further comprises variable bit rate slots for variable bit rate packets. (Raychaudhuri Col. 7 lines 6-40)

Regarding claim 82, the combination of Hou and Raychaudhuri discloses the software product of claim 78 wherein the dynamic allocation sub frame further comprises data slots for data packets. (Raychaudhuri Col. 7 lines 6-40)

Regarding claims 17, 19-21, 23-26 and 28-29, the combination of Hou and Raychaudhuri discloses the method of claim 1 wherein various types of multimedia communication are used and that any type of multimedia may be used (Raychaudhuri Col. 4 line 36-53) as well as Internet communications (Hou, Col. 1 lines 10-22). Though, not expressly disclosed, Examiner takes official notice that it was notoriously ~~obvious~~ well-known in the art at the time of the invention that facsimile, audio broadcast, web browsing, file transfer, network gaming, PUSH, chat room communication, e-mail, video broadcast and video conferencing are various types of multimedia and Internet communication. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use any or all of these types of communication, to provide every possible service to a user, which would be necessary to stay competitive in the telecommunications market.

Regarding claims 58, 60-62, 64-67, 69 and 70, the combination of Hou and Raychaudhuri discloses the method of claim 1 wherein various types of multimedia communication are used and that any type of multimedia may be used (Raychaudhuri Col. 4 line 36-53) as well as Internet communications (Hou, Col. 1 lines 10-22). Though, not expressly disclosed, Examiner takes official notice that it was notoriously ~~obvious~~ well-known in the art at the time of the invention that facsimile, audio broadcast, web browsing, file transfer, network gaming, PUSH, chat room communication, e-mail, video broadcast and video conferencing are various types of multimedia

and Internet communication. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use any or all of these types of communication, to provide every possible service to a user, which would be necessary to stay competitive in the telecommunications market.

Claims 12 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hou in view of Raychaudhuri further in view of Boucher et al. (US 6,226,680 B1).

Regarding claim 12, the combination of Hou and Raychaudhuri discloses the method of claim 2 wherein arbitrating access is further comprised of using various types of logic. Raychaudhuri does not expressly disclose last come first serve logic. Boucher discloses using last come first serve logic with a MAC layer. (Col. 16) Therefore it would have been obvious to one of ordinary skill in the art to use last come first serve logic in arbitrating the MAC layer, in order to implement a stack type system.

Regarding claim 53, the combination of Hou and Raychaudhuri discloses the method of claim 2 wherein arbitrating access is further comprised of using various types of logic. Raychaudhuri does not expressly disclose last come first serve logic. Boucher discloses using last come first serve logic with a MAC layer. (Col. 16) Therefore it would have been obvious to one of ordinary skill in the art to use last come first serve logic in arbitrating the MAC layer, in order to implement a stack type system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis G. West whose telephone number is 571-272-7859. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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